JAVA-111: Session 5

Answering interview questions is crucial in your journey of applied learning. Review them to ensure your understanding of important topics covered in the previous session and to prepare yourself for upcoming challenges. Remember that it's important to answer these questions on your own before viewing the solution. The solutions are hyperlinked to community posts on our platform.

**Note: The questions below have been sourced from previous interviews**

Questions

1. [What is type casting in Java?](https://crio.do/learn/crio-community/topic/what-is-type-casting-in-java/252913)

Additional Readings

* [Arrays in Java](https://www.geeksforgeeks.org/arrays-in-java/)
* [Different methods to create an array in Java](https://www.freecodecamp.org/news/how-to-create-an-array-in-java/)

**✅ 1. What is Type Casting in Java?**

**Type casting** means **changing (or converting) one data type into another**.

There are two main types:

**a) Implicit Type Casting (Widening)**

* Happens automatically when you convert a **smaller type to a larger type**.
* Example:

java

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int a = 10;

double b = a; // int is automatically converted to double

System.out.println(b); // Output: 10.0

**b) Explicit Type Casting (Narrowing)**

* You do it **manually**, and it's needed when converting **larger type to smaller type**.
* Example:

java

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double x = 10.99;

int y = (int) x; // You manually cast double to int

System.out.println(y); // Output: 10 (decimal is lost)

**✅ 2. Arrays in Java**

An **array** is a **collection of elements of the same type**, stored in **contiguous memory**.

Key features:

* Fixed size (once created, it cannot grow).
* Can store **primitive data types** or **objects**.
* Indexing starts from 0.

Example:

java

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int[] numbers = {10, 20, 30};

System.out.println(numbers[1]); // Output: 20

**✅ 3. Different Methods to Create an Array in Java**

**Method 1: Declare and initialize directly**

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int[] arr = {1, 2, 3, 4};

**Method 2: Declare, then assign values**

java

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int[] arr = new int[4]; // creates an array with 4 elements, all 0 by default

arr[0] = 10;

arr[1] = 20;

arr[2] = 30;

arr[3] = 40;

**Method 3: Using loops to fill values**

java

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int[] arr = new int[5];

for (int i = 0; i < arr.length; i++) {

arr[i] = i \* 10;

}

**Method 4: Arrays of objects**

java

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String[] names = new String[] {"Alice", "Bob", "Charlie"};